

**Remarks/Arguments**

The official office action dated June 15, 2004 has been carefully considered and Applicant is appreciative of the Examiner's indication that claims 3 and 4 would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

In the specification, the Abstract has been amended to remove the asserted grounds for objection in accordance with the Examiner's request.

Claims 1-7 remain in the application. By this amendment, claim 8 is canceled without prejudice, and claim 5 has been amended to more particularly point out and distinctly claim the present invention. No new matter is believed or intended to be involved. Applicant believes the changes presented herewith are sufficient to place the present application in condition for allowance. Reconsideration and reexamination is respectfully requested.

*Claim rejections under 35 U.S.C. §103*

Claims 1-2, and 5-7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over EP-1206164 in view of U.S. Patent No. 6,184,501 to Zapf. Applicant respectfully traverses this rejection.

The Examiner states that EP-1206164 discloses the claimed apparatus/method except that EP-1206164 does not disclose an apparatus/method wherein the thermal cells/heater is energized with a polarity opposite to the polarity of current to perform the determination so that the power source and signal source are applied at the same time. The Examiner further states that Zapf discloses thermal cells/heater that are energized with a polarity opposite to the polarity of the current to perform the determination so that the power source and the signal source are applied at the same time. Accordingly, it would have been obvious to one of ordinary skill of the art to have included the opposite polarity of Zapf on the apparatus method EP-1206164. Applicant respectfully disagrees with the Examiner's interpretation of the Zapf reference.

Zapf discloses an object detection system comprising a drive loop and a sensor loop proximal to the drive loop. In operation, an AC electric current is supplied to the drive loop which induces an alternating magnetic field around the drive loop. As a result of the alternating magnetic field, an AC current is generated in the proximal sensor loop. The AC

current in the sensor loop is detected as an alternating voltage via a microcontroller. If a metallic cooking pot is placed over the detection system, the detected alternating voltage will have reduced and thus indicate to the microcontroller that a cooking pot is present. When the cooking pot is detected, power to the relevant heating element is switched on via a relay arrangement, provided that a user has set the controller for that heating element on the control panel (column 3, line 66 - column 4, line 32).

The only disclosure in the Zapf reference that the Applicant can find regarding the specifics of how a heating element is switched on is specifically in column 4, lines 23-32. In this section, Zapf only indicates that a heating element is switched on via a relay arrangement. Applicant can not find any discussion relating to the energizing of the heating element with a polarity opposite to the polarity of the current used to perform the determination as the Examiner asserts Zapf does. Rather Zapf discloses details regarding the detection system (drive loop and sensor loop) and only indicates the use of a relay arrangement for energizing the heating element. Zapf is silent to the details of the relay arrangement.

To establish a prima facie case of obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). In this case, Applicant cannot find any teaching or suggestion in the EP-1206164 or Zapf references of a cooking hob having, among other elements, a system wherein each thermal cell is able to be energized with a polarity opposite to the polarity of the current used to perform the determination, so that the power source and the signal source can be applied at the same time to different thermal cells. Likewise, Applicant cannot find any teaching or suggestion in the EP-1206164 or Zapf references of a method for determining the location of cooking utensils on a cooking hob including, among other steps, the step of applying a power current source and a signal source at the same time to different thermal cells, wherein each thermal cell is energized with a polarity opposite to the polarity of the current used to perform the determination of the location of the cooking utensil. Therefore, there is nothing that would lead one of ordinary skill in the art to attempt to modify the EP-1206164 and the Zapf references to create the inventions of independent claims 1 or 5. Accordingly, Applicant believes the attempted combination of EP-1206164 and Zapf must fail and that independent claims 1 and 5 are patentably distinguishable over the prior art references. Claims 2-4 and 6-7 are dependent on claims 1 and 5 respectively, and thus are patentably distinguishable over the prior art references as well. Since claim 8 has been

cancelled without prejudice, the rejection of claim 8 is moot. Reconsideration is respectfully requested.

For the reasons presented above, it is believed that the application, as now presented, is in condition for allowance, and that there are no remaining issues in the application. Allowance of the application as now presented, and passing of the application to issue, is respectfully solicited.

If for any reason the Examiner feels that this amendment does not so place the application in condition for allowance, it is respectfully requested that she promptly contact applicant's undersigned attorney by telephone at the number shown below so that suitable steps may be taken to place the application in such condition.

Further and favorable action is respectfully requested.

Respectfully submitted,

  
John F. Colligan, Registration No. 48,240  
Telephone: 269 923-6439

WHIRLPOOL PAENTS COMPANY  
500 Renaissance Drive  
Suite 102, MD 0750  
St. Joseph, MI 49085

Date: September 10, 2004